



Falcon Field Airport Aircraft Storage Hangar/Storage Room Checklist - REVISED

Issued August 15, 2013

Thank you for choosing Falcon Field Airport to base your aircraft and for your efforts to comply with these important safety standards. Based on your questions/feedback, as well as observations we have made during the hangar/storage room inspection process, we have prepared this document to serve as your revised 'Checklist' for complying with the current fire, building and lease-related standards and rules for your City-owned hangar/storage room.

The City wants you to enjoy Falcon Field and to help you be successful. As such, we hope to make your inspection experience as seamless as possible. If you are able to answer "YES" to the items on this Checklist, the inspection should only take a minimal amount of your time. This way, you can get back to enjoying your aircraft and the fun of flying.

This checklist replaces all lists provided previously. While we have tried to make this an all-inclusive checklist, we also know that each one of you has unique circumstances or needs. As such, if/when new matters are identified during the ongoing inspections, information will be provided to you via addendums to this checklist.

Aircraft Ownership

- 1) Current City records show the correct FAA-registered 'N' number for the aircraft being stored in the hangar.
- 2) As the tenant, you have at least a 20% ownership interest in the aircraft stored in the hangar or if the aircraft in the hangar is not owned by you, it is leased exclusively to you for a minimum of 12 months. 'Exclusive' means that no one else, including the aircraft owner, is using the aircraft during the term of the lease.
- 3) If the aircraft stored in the hangar is leased by you, a copy of the current aircraft lease agreement is on file in the Airport Administration Office.

What You May Use The Hangar/Storage Room For

- 1) The hangar is used to **store an aircraft** (excluding model aircraft)

Note: Originally, City hangars were designed, received building permits for, and were constructed for only the storage of completed aircraft. However, in order to also accommodate aircraft being constructed, the City is allowing this use as long as these

hangars are inspected every six months to verify that no hazardous/spark-producing activities are being performed inside the hangar.

- 2) If the aircraft in the hangar is **under construction**, the activities involved are no more hazardous than activities involving the exchange of aircraft parts, i.e. activities do not include any open flames, welding, use of spark-producing devices, heating parts above 500 degrees, or use of Class 1 flammable liquids or Class 2 combustible liquids.
- 3) **Aircraft maintenance work** on any aircraft is limited to the exchange of parts and does not include any open flames, welding, use of spark-producing devices, heating parts above 500 degrees, or use of Class 1 flammable liquids or Class 2 combustible liquids.
- 4) **Hazardous activities** such as smoking, fuel service or handling, use of flammable or combustible liquids, painting, paint stripping, doping, welding, production of sparks, or heating parts above 500 degrees fahrenheit are not being performed in the hangar/storage room.

What You May Store in the Hangar/Storage Room

- 1) **Aircraft** (excluding model aircraft) and items that are directly tied to the operation and use of an aircraft

Note: Since the hangars were designed, permitted, and built to store aircraft only, **non-aeronautical items are not allowed** to be stored in the hangar/storage room. Also, limiting storage to aeronautical items helps to limit the amount of combustible/flammable material being stored that can cause or contribute to a fire in your hangar/storage room.

- 2) **Firearms or ammunition:** None are stored in the hangar/storage room.

- 3) **Furniture and Work Space**

- a) Furniture is limited to 1 sofa or lounge chair, up to 4 combustible chairs, bookshelves for storing aviation materials, and a desk. Combustible (i.e. wood) tables and work benches are no longer than 16 feet combined.

Note: There is no limit on the amount of **metal** furniture, tables, and work space allowed as long as access requirements are met (See 'How To Store Your Items # 1).

- 4) **Hazardous Materials**

- a) The only hazardous materials stored are those for which you can demonstrate the aviation need for their storage.
- b) Waste products are removed from the hangar/storage room. These include, but are not necessarily limited to, wastepaper, wood, litter, vehicle parts, automobile tires, or combustible or flammable waste or rubbish of any type.

Note: The Airport Administration Office has Material Safety Data Sheets (MSDS) on file for many of the common hazardous liquids and gases that are stored in hangars/storage rooms. However, please be prepared to identify all hazardous liquids and gases stored in your hangar/storage room so that, if necessary, MSDS can be located by Airport staff and placed on file if they are not currently available.

5) **Refrigerators**

If the refrigerator is not labeled by the manufacturer with a sign that says, “Suitable for Use in a Class I, Division II Location,” it is:

- Elevated at least 18 inches above the floor
- Plugged **directly** into the electrical outlet (i.e. no extension cord)
- Located outside the **Hazardous Areas** (See Exhibit ‘A’ below)

6) **Vehicles:** Storage is limited to aircraft, an aircraft tug device, and bicycles.

Note: Temporary storage of the vehicle you use to get to and from the airport is allowed inside the hangar while you are flying your aircraft. Aircraft tug devices, including golf carts, which have been approved by the City for this use may also be used as transportation around the airport.

Quantities That You May Store

- 1) **Combustible materials** are limited to only what is needed for normal aircraft operation and maintenance. (Example: wood, carpet, rugs)
- 2) **Class 1 Flammable Liquids** (Examples: acetone, methyl-ethyl Ketone, ethanol, 100LL avgas, turpentine, methyl alcohol, xylene)
 - a) Total maximum quantity stored is 10 gallons or less
- 3) **Class 2 – Combustible Liquids** (Examples: Jet A fuel, acetic acid)
 - a) Total maximum quantity stored is 10 gallons or less
- 4) **Class 3 – Combustible Liquids** (Examples: diesel fuel, hydraulic fluid, motor oil, lubricating and turbine oils, mineral spirits, torque seal)
 - a) Total maximum quantity stored is 27.5 gallons or less
- 5) **Flammable Oxygen and Gases**
 - a) Total maximum quantity of oxygen stored is 125 cubic feet or less measured at normal temperature and pressure (NTP)

- b) Total maximum quantity of flammable gases stored is 100 cubic feet or less measured at normal temperature and pressure (NTP)
- c) Gas and oxygen is stored in listed, identified cylinders and is properly secured.
- d) Liquid petroleum gas (LPG), such as propane or butane, is not stored in the hangar/storage room.

How To Store Your Items

- 1) **Access** into and around the hangar/storage room
 - a) Nothing blocks entry into the hangar/storage room
 - b) Nothing is stored in front or under the aircraft
 - c) Nothing is stored within 5 feet above, below, and around the perimeter of the aircraft **main wing** (see Exhibit 'A')
 - d) Once outside the 5 feet aircraft wing perimeter (i.e. the rear part of the aircraft), nothing is stored within 3 feet of the remaining part of the aircraft

- 2) **Amenities**, such as refrigerators, radios, portable fans, coffee makers, swamp coolers, compressors, battery chargers and their control equipment, air conditioning units, portable heating units, vacuums, any other mobile servicing equipment, and any potential ignition sources are not being used in the **Hazardous Areas** (see Exhibit 'A') where the possibility exists for flammable, ignitable, or combustible vapors or liquids. The **Hazardous Areas** consist of:
 - a) The area located from the floor up to 18 inches above the floor throughout the entire hangar
 - b) Any area within 5 feet (measured both horizontally and vertically) from aircraft engines, fuel tanks, and aircraft wings, including down to the floor

Note: The only electrically-operated portable appliances, equipment, tools, and lighting used or installed in any of the **Hazardous Areas** that do not need to be raised 18 inches above the floor are those labeled by the manufacturer with "Suitable for Use in a Class I, Division II Location."

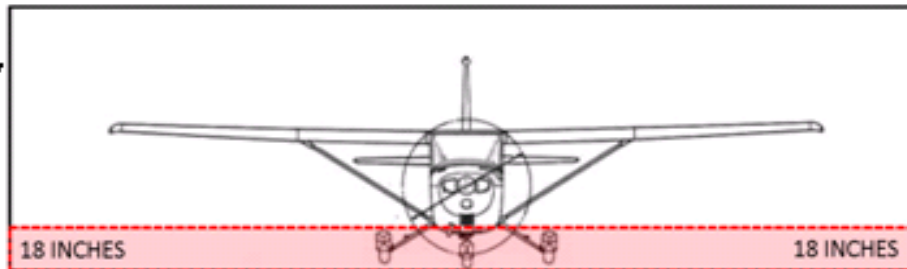
- 3) **Attaching Items** to Hangar/Storage Room Walls
 - a) Items weighing more than 5 pounds are not attached to or hanging from the structural beams of the hangar/storage room.
 - b) Light weight items (less than 40 pounds) that are leaning up against the hangar/storage room wall are secured to the wall with **metal** wire to prevent the items from falling. **Note:** Drilling holes in the structure to secure the wire is allowed.

- 4) **Non-combustible materials** are stored no higher than 15 feet above the floor (measured from the floor to the top of the material stored).

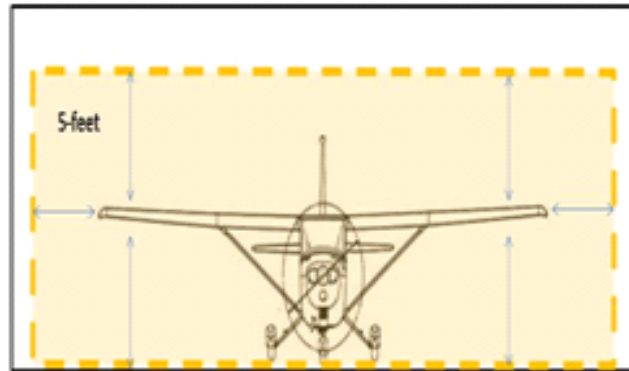
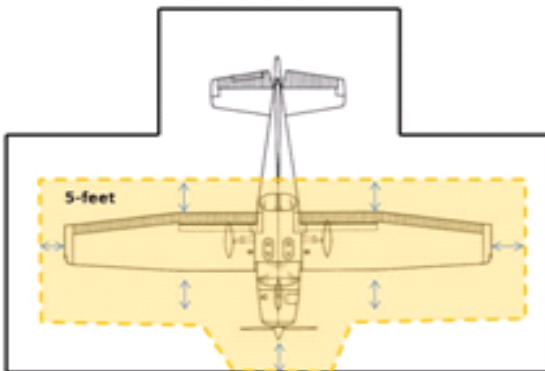
Exhibit 'A' – Hazardous Areas

ELECTRIC TOOLS, CIRCUITS, AND DEVICES WHICH ARE NOT RATED FOR USE WITHIN CLASS I, DIVISION II, HAZARDOUS AREAS MAY NOT BE USED IN THE HAZARDOUS AREAS LISTED BELOW:

- ANY



- ANY AREA WITHIN **5 FEET** OF THE AIRCRAFT WINGS, FUEL STORAGE AREAS, OR ENGINE(S).



NO ACTIVITIES WHICH PRODUCE SPARKS, OPEN FLAMES, HEATING OF METALS OVER **500° F**, OR WHICH USE OR DISTRIBUTE FLAMMABLE LIQUIDS MAY BE PERFORMED ANYWHERE IN THIS AIRCRAFT STORAGE HANGAR.

5) Combustible materials

- Are stored no higher than 12 feet above the floor (measured from the floor to the top of the material stored)
- Are stored in an orderly way and not haphazardly or randomly throughout the hangar/storage room

- c) Solid combustible materials are stored a minimum of 8 feet away from flammable/combustible liquids.

6) **Flammable/combustible liquids**

- a) Are not stored on the floor and no higher than 6 feet above the floor (measured from the floor to the top of the storage containers)
- b) Are stored in one location in the hangar/storage room and in an orderly way
- c) Are stored in **cabinets** or on **shelves** (i.e. not on the floor) that are listed per UL 1275 standard or constructed as follows:

- **Unlisted metal cabinets:**

- Constructed of 18 gauge steel
- Is double walled with 1.5 inch airspace between walls, including the doors
- Joints are riveted or welded and are tight fitting

- **Unlisted wooden cabinets:**

- Are constructed of not less than 1 inch exterior grade plywood, including the doors
- Joints are rabbeted and fastened in two directions with wood screws
- Door hinges are steel or brass
- Painted with intumescent type paint (i.e. paint that is designed to expand in the presence of heat and form a carbon foam that does not transfer heat easily)

- Provided with a conspicuous label in red letters on contrasting background which reads: **“FLAMMABLE-KEEP FIRE AWAY”**

- Doors are well-fitted, self-closing, and equipped with a three-point latch

- Bottom of the cabinet is liquid tight to a height of at least 2 inches

- d) **Aviation fuel** (that is not in the aircraft) is stored in storage containers that are listed by the manufacturer for this use (the containers have the listing info on the label).
- e) All other hazardous liquids are stored in the manufacturer’s original labeled container.

7) **Shelves** (Building permit may be required)

- a) Are adequately braced and anchored according to the manufacturer’s design and instructions
- b) At least 1 inch nominal thickness if constructed of wood
- c) Are deep enough to hold all the allowable containers **Note:** A building permit is required if the shelf is more than 30 inches deep.
- d) A lip or guard is provided on the shelves to prevent individual flammable or combustible liquid containers from being displaced. A rigid metal containment pan,

such as a baking pan, with a minimum of a 1-inch high lip can also be used to store these items on a shelf.

- 8) **Oily rags** and similar debris are stored in a self-closing container that is listed/labeled by the manufacturer for this intended purpose.
- 9) **Electrical extension cords/power strips/surge protectors** are unplugged and stored off the floor when you are not in the hangar/storage room.

What You May Use In Your Hangars/Storage Rooms

1) Electrical extension cords

- a) Are only used when you are in the hangar (i.e. not used as permanent wiring)
- b) Are in good condition with no splicing or electrical tape wrapped around exposed wires
- c) Are Underwriters Laboratory (U/L) or Factory Mutual (FM) approved
- d) Are the heavy-duty type, three wire (two current carrying conductors and a grounding conductor)

Note: Outlet connectors or extension cords designed for indoor or household use and multi adapters may not be used.

2) Power strips/surge protectors

- a) Are the heavy-duty type, three wire (two current carrying conductors and a grounding conductor with a 15 amp circuit breaker)
- 3) Although they may be stored, the following items are not being **used** inside the hangar/storage room. However, they may be used outside.

- a) **Class 1 Flammable Liquids**
- b) **Class 2 Combustible Liquids**
- c) **Flammable Gases**

4) Non-Spark Producing Electrical Tools and Equipment

- a) May be used inside the hangar/storage room under the following conditions:
 - If they are not listed for use in Class I Division II Hazardous Areas, they are at least 18 inches above the floor while being used inside the **Hazardous Areas** (See Exhibit 'A').
 - Each tool or piece of equipment has permanently affixed to it the following warning label:

WARNING

KEEP 5 FT CLEAR OF AIRCRAFT ENGINES AND FUEL TANK AREAS

Note: These warning labels will be provided to you by the Fire Inspector and may also be obtained at the Airport Administration Office.

5) Spark-Producing Tools and Equipment

- a) Spark-producing tools and equipment, such as grinders, electric saws, and drills, are used outside of the hangar/storage room but are not being used inside.

Note: The final determination regarding the safety of any operation, such as cutting, grinding, or drilling may depend on the material being used rather than the tool. For example, aluminum typically will not spark, whereas steel or iron is likely to spark. Visit with the Fire Inspector if you are unsure about whether or not a specific tool or piece of equipment can be used inside the hangar.

Other Safety Requirements

1) Fire Extinguishers

- a) Hangar: There are at least two **2A10BC** approved fire extinguishers mounted on brackets on opposite walls next to the hangar door.
- b) Storage Room: There is at least one **2A10BC** approved fire extinguisher mounted on a bracket next to the door.

Note: They should be mounted 2-5 feet off the floor. Drilling holes in the structure to mount the fire extinguishers is allowed.

- c) Aircraft Tug: Either one **20BC** fire extinguisher or two **2A10BC** fire extinguishers are mounted on the vehicle.

2) A metal drip pan available for the aircraft is located under any places where oil and/or fuel may drip from the aircraft.

3) Aircraft and Motorized Aircraft Tug Batteries

- a) Are not being charged while in the aircraft
- b) Battery equipment and batteries being charged inside the hangar/storage room are at least 5 feet away from the aircraft wings and 18 inches off the floor.

Modifications/Additions Requiring a Building Permit

- 1) If any of the modifications/additions listed below have been made in the hangar/storage room, or you are considering making them, then you need to follow these steps:
 - a) Notify Airport Administration. The Airport must agree in writing to allow the modifications/additions to be in the hangar/storage room.
 - b) Apply for and receive a building permit from the City Development & Sustainability Department (Building Safety)
 - c) Completed modifications/additions must be inspected and approved by the City Development & Sustainability Department (Building Safety).
- 2) Modifications/additions that require a City building permit include, but are not necessarily limited to:

Electrical system	Office/break room/extra storage room
Mezzanine/loft	Foam plastic insulation
Air lines	Shelves over 30 inches deep
Plumbing/water	Storage shelves over 5 feet 9 inches tall/rack storage
- 3) **220 VAC electrical modifications** are not permitted in any of the hangars/storage rooms.

Thank you for your time and attention to this important matter. A safe airport is good for everyone.

Questions?
Falcon Field Airport
Administration Office
Call (480) 644-2450